

CLAIMS

1. A method for soft-programming an electrically erasable nonvolatile memory device, comprising:

performing a first soft-programming with a first soft-programming multiplicity in given operating conditions; and perform a second soft programming with a second soft-programming multiplicity differing from the first soft-programming multiplicity in the case where said given operating conditions are not present.

2. The soft-programming method according to claim 1 wherein said first soft-programming multiplicity is greater than the one used for writing data in the memory device.

3. The soft-programming method according to claim 1 wherein said first soft-programming multiplicity is twice the one used for writing data in the memory device.

4. The soft-programming method according to claim 1 wherein said second soft-programming multiplicity is smaller than said first soft-programming multiplicity.

5. The soft-programming method according to claim 1 wherein said second soft-programming multiplicity is equal to the one used for writing data in the memory device.

6. The soft-programming method according to claim 1 wherein said first soft-programming multiplicity is used in the case where the current absorbed during soft-programming carried out with said first soft-programming multiplicity meets a given relation.

7. The soft-programming method according to claim 6 wherein said relation is defined by the condition that the current absorbed during soft-programming carried out with said first soft-programming multiplicity is either smaller or equal to a threshold current.

8. The soft-programming method according to claim 6 wherein said threshold current is equal to the maximum current which is available for the writing operations and which can be generated within the memory device.

9. An electrically erasable nonvolatile memory device, characterized by soft-programming means operating with a first soft-programming multiplicity in given operating conditions and with a second soft-programming multiplicity differing from the first soft-programming multiplicity in the case where said given operating conditions are not present.

10. The memory device according to claim 9 wherein said first soft-programming multiplicity is greater than the one used for writing data in the memory device.

11. The memory device according to claim 9 wherein said first soft-programming multiplicity is twice the one used for writing data in the memory device.

12. The memory device according to claim 9 wherein said second soft-programming multiplicity is smaller than said first soft-programming multiplicity.

13. The memory device according to claim 9 wherein said second soft-programming multiplicity is equal to the one used for writing data in the memory device.

14. The memory device according to claim 9 wherein said first soft-programming multiplicity is used in the case where the current absorbed during soft-programming carried out with said first soft-programming multiplicity meets a given relation.

15. The memory device according to claim 14 wherein said relation is defined by the condition that the current absorbed during soft-programming carried out with said first soft-programming multiplicity is smaller or equal to a threshold current.

16. The memory device according to claim 14 wherein said threshold current is equal to the maximum current which is available for the writing operations and which can be generated within the memory device.

17. A method of soft-programming for an electrically erasable nonvolatile memory device, and an electrically erasable nonvolatile memory device implementing said method of soft-programming, basically as described with reference to the attached drawings.